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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------|-------------|----------------------|---------------------|------------------|
| 09/941,540 | 08/29/2001 | Steven A. Schauer | 01-359 1496.00142 | 7034 |
| 24319 | 7590 | 03/18/2005 | EXAMINER | |
| LSI LOGIC CORPORATION | | | PHU, PHUONG M | |
| 1621 BARBER LANE | | | ART UNIT | PAPER NUMBER |
| MS: D-106 | | | | 2631 |
| MILPITAS, CA 95035 | | | | |

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/941,540 | SCHAUER ET AL. | |
| | Examiner | Art Unit | |
| | Phuong Phu | 2631 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 August 2001.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-13 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation “said differential serial signal” on line 5. This limitation is lack of antecedent basis.

Claim 1 recites the limitation “a first circuit configured to convert between (i) a serial signal on a first differential interface and (ii) a parallel signal”. This limitation renders the claim indefinite because it is unclear in the limitation whether the “first circuit” converts the “serial signal” into the “parallel signal”, or whether “the first circuit” converts the “parallel signal” into “the serial signal”.

Similarly, claim 7 recites the limitation “converting between a serial signal at a first differential interface and a parallel signal”. This limitation renders the claim indefinite.

Similarly, claim 13 recites the limitations “means for converting between (i) a serial signal on a first differential interface and (ii) a parallel interface”. This limitation renders the claim indefinite.

Claims, (if any) depended on above claims, are also rejected with the above reasons.

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3. Claims 1-6 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claim 1 omits functional/structure/connectional interrelationships of “ pair of non-crossing conductive paths” and/or “second differential interface” with “first circuit” because it is unclear in the claim about the functional relationships of “serial signal” and “parallel signal”, as the input/output of “first circuit”, with the input(s)/output(s) of “ pair of non-crossing conductive paths” and “second differential interface”, in order to make the claimed system as a complete operative/connective system.

Claim 1 omits functional/structure/connectional interrelationships of “second circuit” with “first circuit”, “ pair of non-crossing conductive paths” and/or “second differential interface” because it is unclear in the claim about the functional relationships of the input/output of “second circuit” with input(s)/output(s) of “first circuit”, “ pair of non-crossing conductive paths” and/or “second differential interface” in order to make the claimed system as a complete operative/connective system.

Similarly, claim 13 omits functional/structure/connectional interrelationships of “means for converting” with “ pair of non-crossing conductive paths” and/or “second differential interface” in order to make the claimed system as a complete operative/connective system.

Similarly, claim 13 omits functional/structure/connectional interrelationships of “means for inverting” with “means for converting”, “ pair of non-crossing conductive paths” and/or “second differential interface” in order to make the claimed system as a complete operative/connective system.

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Claims, (if any, depended on the above claims), are also rejected with the above reasons.

4. Claims 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

Claim 7 omits functional interrelationships of step “routing …non-crossing paths” with step “converting … a parallel signal” because it is unclear in the claim about the functional relationships of “serial signal” and “parallel signal” with the input(s)/output(s) of “non-crossing paths” and “second differential interface”, in order to make the system in the claimed method as a complete operative/connective system.

Claim 7 omits functional interrelationships of step “inverting … an inverting state” with steps “converting … a parallel signal” and/or “routing …non-crossing paths” in order to make the system in the claimed method as a complete operative/connective system.

Claims, (if any, depended on the above claims), are also rejected with the above reasons.

Conclusion

5. References (6353334), (5666354), (6515508) and (6618383) are cited because they are pertinent to the claimed system/method.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuong Phu
Primary Examiner
Art Unit 2631

Phuong Phu
Phuong Phu
02/16/2005

PHUONG PHU
PRIMARY EXAMINER